



Revision: January 06th, 2020

| PRODUCT NAME | ITEM NO. | SUPPLEMENTARY DETAILS |
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| V2A additive | 92002606 | 80 ml |

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| Description | Additive for V2A etchant. |
| Material | Sulfuric acid <25%, ortho phosphoric acid <5%, hexamethylenetetramine <5% Further ingredients do not surpass the mandatory identification threshold values. Hence, they can be considered non-hazardous additives. |
| Properties | Blackish-brown liquid with characteristic acidic smell. |
| Application | The product is used as an additive for V2A etchant. The additive ensures a better wettability of metal surfaces, higher dissolution rates of metal oxides and a better grain boundary etching. It's application is strongly related to the application of the etchant. The additive itself can not be used as a metallographic etchant. The product is added volumetrically before the first application of the V2A etchant. The amount has to be adjusted according to etched material and used etching method. A common range is located between 0.1 to 1 Vol.%. The mentioned concentration ranges are no threshold values, depending on the application amount outside of the information given in this PDS may be necessary. |
| Health and safety | The additive should be applied in a sufficient fume-cupboard. Otherwise a sufficient ventilation of the working space has to be ensured. The legal threshold values for the contained hazardous substances cannot be surpassed under any circumstances. Besides protective clothing, closed eye protection and sufficient protective gloves (fluororubber 0.4mm) have to be worn. In the case of dermal exposure, the exposed regions must be cleaned with water and soap. Further instructions for safety and first aid can be taken from the SDS. |
| Environmental precautions | The liquid should be neutralized with strong bases (e.g. NaOH) before deposition. The product must not be released into phreatic-/surface waters, concrete foundations. The product is classified as aquatic toxicity class 2. The product may not be deposited alongside domestic waste. The deposition has to be conducted according to legal regulations. |
| Storage | The V2A additive belongs to storage class 8A (TGRS 510). It has to be stored in tightly sealed containers in a cool (3-30°C) and dry storage room. It should be stored separately from explosive substances and peroxides. The storage facility should prevent the contamination of surface and phreatic waters. |